1.0 INTRODUCTION

1.1 Definition of Reliability-Centered Maintenance (RCM). RCM is a life cycle process for establishing and adjusting preventive maintenance (PM) requirements for all levels of maintenance. RCM ensures that the PM requirements are based on the failure characteristics of the equipment and allow it to realize its inherent reliability. Only applicable and effective tasks are used to prevent failures. If an appropriate task does not exist, no PM will be performed. The equipment will be redesigned to eliminate the failure mode if the failure is of a safety consequence. As the equipment experiences changes (changes in mission, modifications, etc.), RCM will adjust all of its PM requirements.

1.2 Purpose of Document. As directed by NAVAIRINST 4790.20 series, PM requirements shall be identified by conducting a RCM analysis, based on results of the failure modes, effects and criticality analysis (FMECA). This manual has been written to provide a single source guidance document for Program Managers for Logistics (PMAs), Assistant Program Managers for Logistics (APMLs), In-service Support Team (ISST) Leaders, and anyone tasked with performing a RCM analysis. It covers (1) planning for RCM, (2) RCM analysis theory and specific guidance, (3) documenting the analysis, (4) implementing the results of the analysis, and (5) sustaining the RCM analysis through Age Exploration (AE), including guidance on documenting the cost savings obtained by using RCM. This manual explains RCM requirements as implemented by Naval Air Systems Command’s (NAVAIR's) current RCM software (see section 1.3). MIL-STD-2173, Reliability-Centered Maintenance Requirements for Naval Aircraft, Weapons Systems and Equipment, is for guidance only.

1.3 RCM Software. NAVAIR’s current RCM software is the Integrated Reliability-Centered Maintenance System (IRCMS). This software shall be used to perform all RCM analyses for NAVAIR. For more information and current version contact the RCM program manager:

Commanding Officer
Naval Air Systems Command
Attn: AIR-3.2B (RCM Program Manager), Bldg 446
47056 McLeod Road, Unit 8
Patuxent River, MD 20670-1626
(301) 342-3838 extension 176

Use of equivalent standard commercial software shall be approved by AIR-3.2B.

1.4 RCM Training. The following is a list of RCM related courses. All prospective RCM analysts, either government or contractor, should be formally trained to perform RCM.

1.4.1 Naval Air Systems Command RCM Analyst Course. NAVAIR offers the RCM Analyst course. This course covers NAVAIR's RCM methodology and provides training on NAVAIR's current RCM software. Local On-the-Job Training (OJT) can also be provided by experienced RCM analysts who can provide “real world” RCM analysis techniques. For more information contact the RCM program manager:

Commanding Officer
Naval Air Systems Command
Attn: AIR-3.2B (RCM Program Manager), Bldg 446
47056 McLeod Road, Unit 8
Patuxent River, MD 20670-1626
(301) 342-3838 extension 176

1.4.2 Air Force Institute of Technology RCM Analysis Course. The Air Force Institute of Technology offers RCM Analysis course. This course is a Defense Acquisition Workforce Improvement Act (DAWIA) ACE course. For more information contact:

Air Force Institute of Technology
School of Systems and Logistics,
Professional Continuing Education
Wright-Patterson Air Force Base, Ohio 45433-7765
(937) 255-7777 extension 3164 or DSN: 785-7777 ext 3164

1.5 RCM Working Group. The RCM Working Group is an AIR-3.0 chartered working group of ISST/Integrated Project Team (IPT) RCM experts. It provides a formal forum for the regular and timely exchange of technical RCM information in order to standardize RCM concepts, philosophies, and techniques. The working group meets periodically and is available for technical RCM support to programs (as required). AIR-3.2B is the Chairman of the RCM Working Group and should be contacted for any information.